1) Since h matrix is a seperable into column vectors u and v given by the below formula

$$h_{Rl} = u_R v_l \quad \text{(Given as per statement)}$$

$$\sum_{Rl} h_{Rl} = \sum_{Rl} u_R v_l \quad \text{(Adding summation sign both sides.}$$

$$\sum_R \sum_l h_{Rl} = \sum_R \sum_l u_R v_l \quad \text{(2 summations can be computed as independent summations)}$$

$$\sum_R \sum_l h_{Rl} = \sum_l \sum_R u_R v_l \quad \text{(because order of summati can be changed}$$

$$\sum_R u_R = \sum_l v_l = 1 \; ;$$

$$\sum_R \sum_l h_{Rl} = \sum_l 1 . v_l$$

$$\Rightarrow \sum_R \sum_l h_{Rl} = 1 . 1 = 1$$